

SMC8028L2

Managed 28 Port Gigabit Standalone L2 Ethernet Switch



Product Overview

The SMC8028L2 is a standalone Gigabit Ethernet Layer 2 switch with 24 10/100/1000 ports and 4 combo Gigabit Ethernet RJ-45/SFP ports. The SMC8028L2 is a fully managed switch that supports power saving. It offers advanced administration through a user-friendly web interface. Sophisticated QoS and VLAN support provide great scalability for mission-critical applications. Switching ports can be aggregated to create a high bandwidth pipe to the network. Comprehensive network management functions such as STP/RSTP/MSTP protocol for standard bridging, SNMP, RMON and advanced security are fully supported.

Key Features and Benefits

Performance and Scalability

With 56Gbps switching capacity, the SMC8028L2 delivers non-blocking and wire-speed switching performance for all gigabit connections. The supports 24 10/100/1000 ports and 4 combo Gigabit Ethernet RJ-45/SFP ports with flexible choices for copper or fiber uplinks. It allows users to take full advantage of existing high-performance.

High Availability

With IEEE 802.1w Rapid Spanning Tree Protocol, the SMC8028L2 provides a loop-free network and redundant links to the core network with rapid convergence less than 1 second.

IEEE 802.1s Multiple Spanning Tree Protocol allows a spanning-tree instance per VLAN for Layer 2 load sharing on redundant links.

IEEE 802.3ad Link Aggregation Control Protocol (LACP) increases bandwidth by automatically aggregating several physical links together as a logical trunk and offers load balancing and fault tolerance for uplink connections.

IGMP snooping provides fast client joins and leaves of multicast streams, prevents flooding of IP multicast traffic, and limits bandwidth intensive video traffic to the subscribers only.

Q-in-Q allows service providers to provide business user with secure L2 Virtual Private Network between Headquarter with branch offices without changing the existing VLAN configuration.

Comprehensive QoS

The SMC8028L2 offers advanced Quality of Service for traffic classification, marking and scheduling to deliver best-in-class performance for data, voice and video traffic at wire speed.

8 egress queues per port enable differentiated management of up to 8 traffic types.

Traffic is prioritized according to IEEE 802.1p, DSCP, IP precedence and TCP/UDP port number, to provide optimal performance to real-time applications.

Asymmetric bidirectional rate-limiting per port or per traffic class preserves network bandwidth and allows maximum control of network resources.

Enhanced Security

The SMC8028L2 provides enhanced security functions to protect the network from the edge.

The IEEE 802.1x port-based access control ensures only authorized users and devices are allowed to access the network.

After users and devices access the network, the network resources can be restricted per access right.

Access Control Lists (ACLs) restrict users and devices from accessing sensitive network resources by denying packets based on L2 /L3/L4 headers.

Security Shell (SSH) and Secure Sockets Layer (SSL/HTTPS) encrypt network management information via Telnet and web, providing secure network management.

TACACS+/RADIUS authentication enables centralized control of the switch and restricts unauthorized users from altering the configuration of the switch.

Private VLAN isolates edge ports to ensure user privacy.

Superior Management

The SMC8028L2 support IPV6 management functions in Web/ SNMP / Telnet / TFTP allows it to be used in IPV6 network for future investment protection

The SMC8028L2 can be managed through by industry standard Command Line Interface (CLI) which provides a common industry look and feel to reduce training and operations costs. It also provides easy-of-use web GUI interface through a standard web browser.

With four groups of RMON, the SMC8028L2 can easily backup and restore firmware and configuration files via TFTP.

Physical Ports

24 RJ-45 10/100/1000Base-T ports
 4 Combo G (RJ-45/SFP) ports
 1 console port

Performance

Switching Capacity: 56Gbps
 Forwarding Rate: 41.7Mpps
 MAC Address Table Size: 8K
 Packet Buffer Size: 1.75MB

L2 Features

Auto-negotiation for port speed and duplex mode
 Flow Control: IEEE 802.3x & Back-Pressure
 Spanning Tree Protocol:

- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
- BPDU guard
- Root guard
- Auto Edge

VLANs:

- 255 IEEE 802.1Q VLANs, Port-based VLANs, GVRP
- IEEE 802.1v Protocol-based VLANs
- Private VLAN

Link Aggregation:

- Static Trunk, IEEE 802.3ad Link Aggregation Control Protocol
- Trunk groups: 32, Trunk links: 2-8

IGMP Snooping:

- IGMP v1, v2 snooping
- IGMP Queried
- IGMP snooping leave proxy
- IGMP filtering/throttling
- IGMP immediate leave

QinQ

Jumbo frames up to 9KB

IPv6 Features

IPv4/IPv6 Dual Protocol stack
 IPv6 Address Types Stack: Multicast / Unicast
 IPv6 Neighbor Discovery
 ICMPv6 Redirect (host)
 IPv6 SNMP/HTTP/Telnet/SSH/RADIUS/TACACS+
 IPv6 ACL and DSCP remapping

QoS Features

Priority Queues: 8 hardware queues per port
 Traffic classification based on IEEE 802.1p CoS, IP Precedence, DSCP,
 TCP/UDP port number and Access Control List
 Scheduling: WRR and strict priority
 DiffServ
 Bandwidth Control:

- Egress rate limiting: 500Kbps granularity
- Ingress rate limiting: 500Kbps granularity

Security

IEEE 802.1x port-based/ MAC-based access control
 RADIUS authentication
 IP Source Guard
 TACACS+
 Access Control List
 ACL bind to VLAN
 SSH v2
 HTTPS
 DHCP snooping
 DHCP option 82 relay
 IP Source guard
 Dynamic ARP Inspection (DAI)

Management

Switch Management:

- CLI via console port or Telnet
- WEB management
- SNMP v1, v2c, v3

Firmware & Configuration:

- Dual firmware images
- Firmware upgrade via TFTP server
- Multiple configuration files
- Configuration file upload/download via TFTP server

RMON (groups 1, 2, 3 and 9)

BOOTP, DHCP for IP address assignment

SNTP

Event/Error Log/Syslog

SNMP Standards

- RFC 2674 VLAN MIB
- RFC 1213 MIB II
- RFC 4188 Bridge MIB
- RFC 4668 Radius auth. Client MIB
- RFC 4670 Radius Accounting MIB
- RFC 3635 Ethernet-like MIB
- RFC 2863 Interface Group MIB using SMI v2
- RFC 2933 IGMP MIB
- RFC 3636 802.3 MAU MIB
- RFC 4133 Entity MIB version 3
- RFC 3414 User-based Security Model for SNMPv3
- RFC 3415 View-based access Control Model for SNMP
- IEEE 802.3AB LLDP-MIB
- IEEE 802.3ad MIB (IEEE802.3-AD-MIB)
- RFC 2819 RMON-MIB
- RFC 3411 SNMP-FRAMEWORK-MIB

IEEE Standards

IEEE 802.3 Ethernet,
 IEEE 802.3u Fast Ethernet,
 IEEE802.3z Gigabit
 IEEE 802.1D MAC Bridges
 IEEE802.1p priority tags
 IEEE802.1Q VLAN
 IEEE802.1ac VLAN tagging
 IEEE802.1ad Link aggregation control protocol
 IEEE802.1w Fast Spanning Tree
 IEEE802.1x authentication
 802.3x Flow Control
 802.1Q-2005 Multiple Spanning Tree (phase 2 feature)

Mechanical

Dimension (H x W x D) cm: 4.4 x 44 x 23cm
 LED Indicators: Port, Uplink, System, Diagnostic
 AC Power Input: 100 ~ 240VAC, 50 ~ 60Hz
 Maximum Power Consumption: 54W
 Weight: 2.22Kg (4.89lbs)

Safety

CSA/NRTL (UL60950, CSA 22.2.No 60950)
 TUV/GS(EN60950)
 CB

Electromagnetic Compatibility

CE Mark Class A
 EN50081-1:
 EN55022 Class A
 EN50082-1:
 IEC 1000-4-2/3/4/6)
 EN60555-2 Class A
 EN60555-3
 FCC Class A
 VCCI Class A

Environmental Specifications

Temperature:
 ■ IEC 68-2-14
 ■ 0°C to 45°C (Standard Operating)
 ■ -40°C to 70°C (Non-Operating)
 Humidity: 10% to 90% (Non-condensing)
 Vibration: IEC 68-2-36, IEC 68-2-6
 Shock: IEC 68-2-29
 Drop: IEC 68-2-32

Warranty

3 years

Ordering Information

Optional Accessories

SMC1GSFP-SX
 SMC1GSFP-LX
 SMC1GSFP-LHX
 SMC1GSFP-ZX

Product Description

Small Form Factor Pluggable (Distance: 500m; Wavelength: 850nm)
 Small Form Factor Pluggable (Distance: 10km; Wavelength: 1310nm)
 Small Form Factor Pluggable (Distance: 40km; Wavelength: 1310nm)
 Small Form Factor Pluggable (Distance: 80km; Wavelength: 1550nm)

Contact

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